

REMARKS

Applicants respectfully request further examination and reconsideration in view of the above amendments and the arguments set forth fully below. In the Office Action mailed January 31, 2007, claim 8 has been rejected and objected to, and claims 1-7 have been allowed. In response, the Applicants have submitted the following remarks and amended claim 8. Accordingly, claims 1-8 are still pending. Favorable reconsideration is respectfully requested in view of the amendments and the remarks below.

Claim Objections

Claim 8 has been objected to because of a number of informalities and grammatical errors, as outlined in the Office Action. By the above amendments, the Applicants have amended claim 8 to remedy all of the informalities and grammatical errors. Accordingly, the Applicants respectfully request that the Examiner withdraw the objections to claim 8.

Rejections Under 35 U.S.C. §112

Claim 8 has been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, it is stated within the Office Action that in claim 8, part c.ii., the variables $[d_1(\theta_1, S_1, X_{i-1}) + d_2(\theta_2, S_2, X_{i-1})]$ are not defined. It is further stated that due to this, the mathematical expression disclosed for determining the positions of other groups is not completely defined.

The Applicants respectfully disagree with this rejection, and further point out that in paragraphs 37-66, these constraints are amply defined. Specifically, the Applicant respectfully submit that these variables, which are the second constraints in the mathematical expression included in claim 8, are give by equation (3). Equation (3) will uniquely solve for the d's in the mathematical expression. In the constant angle case, equation (4) is utilized, and in the constant arc case, equation (5) is utilized. Therefore, the Applicants respectfully submit that the two variables that are in questions are completely defined in the specification of the invention. For at least these reasons, the Applicants respectfully submit that the rejection to claim 8 under 35 U.S.C. §112, second paragraph, be withdrawn.

Rejections Under 35 U.S.C. §101

Claim 8 has been rejected 35 U.S.C. §101 because it is stated within the Office Action that it is directed towards non-statutory subject matter. Specifically, within the Office Action it is stated that the steps of calculating the initial groove spacing and determining the positions of the grooves are mathematic results and are not tangible.

By the above amendments, the Applicants have amended claim 8 to include the step of adjusting the initial groove spacing and the positions of the other grooves according to the calculating and determining steps, such that the final result achieved by the claimed invention in claim 8 "useful, tangible, and concrete." For at least these reasons, the Applicants respectfully submit that the rejection under to claim 8 under 35 U.S.C. §101 be withdrawn.

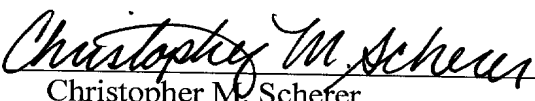
Allowable Subject Matter

Within the Office Action it is stated that claims 1-7 are allowed in view of the prior art. The Applicants respectfully acknowledge the allowability of claims 1-7 and thank the Examiner for the same.

For these reasons, Applicants respectfully submit that all of the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at 414-271-7590 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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